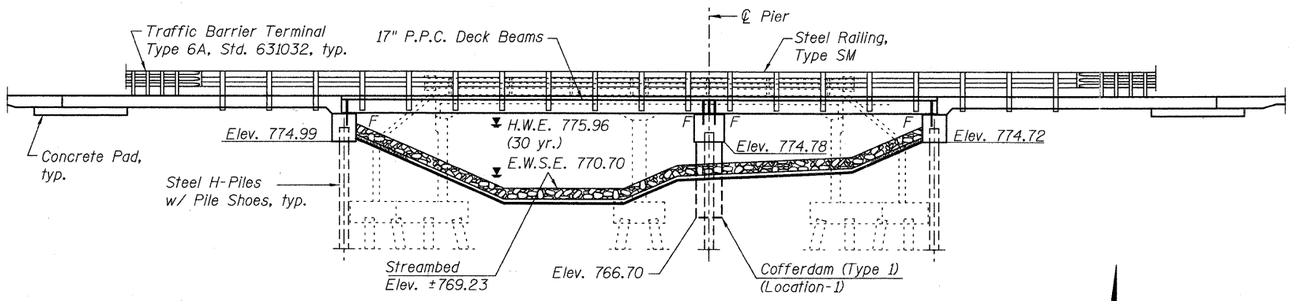
Site Benchmark #2: Square mark cut on top of Northwest wingwall of the existing bridge, Elev. 779.43. (NAVD 88 Datum)

Existing Structure:
Structure number 045-3051 was originally built in 1964 under Section 107B-TR. The structure consists of a two-span reinforced concrete slab bridge founded on reinforced concrete closed abutments and a solid wall pier supported by untreated timber piles. The structure measures 43'-9" back to back of abutments with two 21'-0" spans and 28'-0" out to out of the bridge deck. The bridge will be closed during construction and traffic detoured.

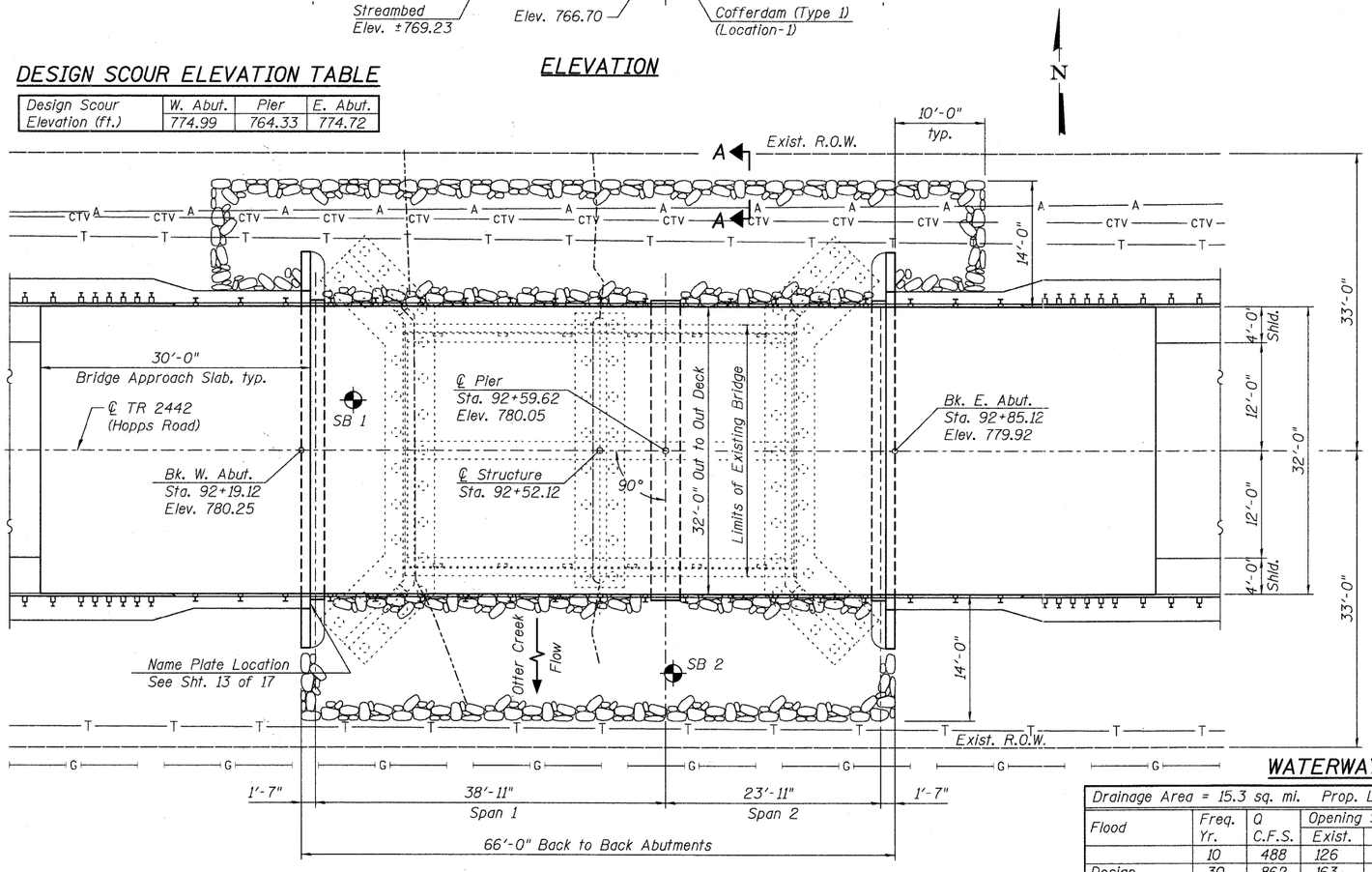
Salvage:
Dry hydrant attached to southwest wingwall to be salvaged.
Contractor to deliver to location as directed by the Engineer.



ELEVATION

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier	E. Abut.
	774.99	764.33	774.72



PLAN

INDEX OF SHEETS

1. GENERAL PLAN AND ELEVATION
2. GENERAL NOTES & BILL OF MATERIAL
3. TOP OF WEST APPROACH SLAB ELEVATIONS
4. TOP OF EAST APPROACH SLAB ELEVATIONS
5. SUPERSTRUCTURE
6. SUPERSTRUCTURE DETAILS
7. BRIDGE APPROACH SLAB DETAILS (1 OF 2)
8. BRIDGE APPROACH SLAB DETAILS (2 OF 2)
9. STEEL RAILING, TYPE SM
10. 17"X48" PPC DECK BEAM - SPAN 1
11. 17"X48" PPC DECK BEAM - SPAN 2
12. 17"X48" PPC DECK BEAM DETAILS
13. ABUTMENTS
14. PIER
15. HP PILE DETAILS
16. SOIL BORING LOG I
17. SOIL BORING LOG II

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

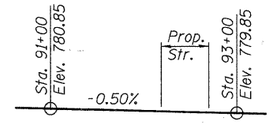
f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (½"ϕ low lax. Strands)
fpbt = 201,960 psi (½"ϕ low lax Strands)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.085g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.153g
Soil Site Class = D



PROFILE GRADE

(℄ Hopps Road)

OTTER CREEK
BUILT 201X BY
KANE COUNTY
SEC. 04-08107-00-BR
HOPPS ROAD
STR. NO. 045-3180
LOADING HL-93

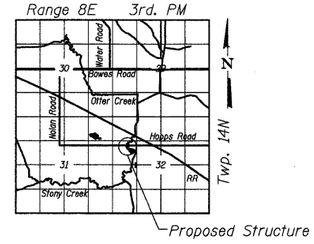
NAME PLATE

See Std. 515001

I certify that to the best of my knowledge information and belief, the bridge and design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges".

David L. Smoot
Date: December 15, 2011
License Expires: 11/30/2012

LICENSED STRUCTURAL ENGINEER
DAVID L. SMOOT
081-005861
ST. CHARLES
ILLINOIS
STATE OF ILLINOIS



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area = 15.3 sq. mi. Prop. Low Grade Elev. 778.98 @ Sta. 95+03.70

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	488	126	154	774.81	0.24	0.18	775.05	774.99
Design	30	862	163	205	775.96	0.39	0.24	776.35	776.20
Base	100	1159	202	258	776.85	0.57	0.37	777.42	777.22
Max. Calc.	500	2171	716	348	778.78	1.19	1.24	779.97	780.02

GENERAL PLAN & ELEVATION
HOPPS ROAD OVER OTTER CREEK
SEC. 04-08107-00-BR
KANE COUNTY
STA. 92+52.12
STRUCTURE NO. 045-3180

FILE NAME = P:\DGBEL WEST Projects\2009\09-0073 HoppsPhII\Structural\Dgn\FinalPlans\045308-63644-001-GPE.dgn

WILLS BURKE KELSEY ASSOCIATES LTD.
116 West Main Street, Suite 201
St. Charles, Illinois 60174

USER NAME = nparris	DESIGNED - DLS	REVISED -	
	CHECKED - AEU	REVISED -	
PLOT SCALE =	DRAWN - DLS	REVISED -	
PLOT DATE = 12/16/2011	CHECKED - AEU	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 17 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2442	04-08107-00-BR	KANE	80	35
		CONTRACT NO. 63644		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		